IN THE CLAIMS:

Please reconsider the claims as follows:

1. (original) A method of temperature stabilization of a wavelength of a laser, comprising:

measuring a representative temperature of the laser;

measuring the wavelength using an internal etalon of the wavelength;

defining a correction factor for the etalon using an external meter of the wavelength; and

operating a module defining the representative temperature at a set point corresponding to a generation of an optical power at a wavelength equal to a sum of the wavelength measured using the internal etalon and the correction factor.

- 2. (original) The method of claim 1 wherein the wavelength of the laser is measured using the external meter prior to operating the laser in an optical transmission system.
- 3. (original) The method of claim 1 wherein the correction factor is defined prior to operating the laser in an optical transmission system.
- 4. (original) The method of claim 1 wherein the representative temperature is a temperature selected from the group consisting of a temperature of a laser chip of the laser, temperature of the internal etalon, a temperature of the module, a temperature of a submount housing the laser chip and the internal etalon, and a temperature of a medium between the laser chip, the internal etalon, and the module.
- 5. (original) The method of claim 1 wherein the module comprises a thermoelectric cooler/heater.

May-09-2006 10:42am

- 6. (original) The method of claim 1 wherein the representative temperature is measured using a thermistor or a thermocouple.
- 7. (original) The method of claim 1 wherein an accuracy of the external meter is equal or greater the accuracy of the internal etalon.
- 8. (original) The method of claim 1 wherein the internal etalon measures the wavelength using a method, comprising:

defining of a ratio between a first electrical signal proportional to the output power at an input of the internal etalon and a second electrical signal proportional to the output power at an output of the internal etalon.

- 9. (original) The method of claim 1 wherein the correction factor is defined using a method, comprising:
 - (a) measuring the wavelength of the laser using the internal etalon;
 - (b) measuring the wavelength of the laser using the external meter;
 - (c) measuring the representative temperature;
 - (d) modifying a bias current of a laser chip of the laser;
- (e) adjusting the representative temperature until the external meter measures the same wavelength as at the step (b);
 - (f) defining a difference in the representative temperature at the steps (c) and (e); and
 - (g) measuring the wavelength using the internal etalon.
- 10. (original) The method of claim 1 wherein the laser assembly comprises:

a laser chip disposed on a submount;

the internal etalon disposed on the submount;

the module controlling a temperature of the laser chip and the first etalon;

- a temperature sensor;
- a photodetector of an optical signal proportional to a laser output power at an input of the internal etalon; and
- a photodetector an optical signal proportional to the laser output power at an output of the internal etalon.
- 11. (original) An apparatus for temperature stabilization of a wavelength of a laser, comprising:
 - a laser power supply;
 - a laser chip assembly comprising:
 - a laser chip;
 - a wavelength locker comprising an etalon of the wavelength; a module controlling a temperature of the laser chip

and the etalon; and

- a sensor of a representative temperature; and a temperature controller, comprising:
- a calculator of the wavelength, the calculator coupled to the wavelength locker and comprising a memory of a correction factor compensating for thermal instability of the etalon;
 - a power supply facilitating a temperature set point of the module,

and

- a processor coupled to the calculator and the sensor and defining a set point of the power supply.
- 12. (original) The apparatus of claim 11 wherein the representative temperature is a temperature selected from the group consisting of a temperature of the laser chip, temperature of the etalon, a temperature of the module, a temperature of a submount housing the laser chip and the etalon, and a temperature of a medium between the laser chip, the etalon, and the module.

- 13. (original) The apparatus of claim 11 wherein the sensor comprises a thermistor or a thermocouple.
- 14. (original) The apparatus of claim 11 wherein the etalon measures the wavelength using a method, comprising:

defining of a ratio between a first electrical signal proportional to an output power of the laser at an input of the etalon and a second electrical signal proportional to the output power of the laser at an output of the etalon.

- 15. (original) The apparatus of claim 11 wherein the correction factor is determined using a wavelength meter coupled to an output of the laser outside the laser chip assembly.
- 16. (original) The apparatus of claim 15 wherein the correction factor is determined prior to operating the laser in an optical transmission system.
- 17. (original) The apparatus of claim 15 wherein the correction factor is defined using a method, comprising:
 - (a) measuring the wavelength of the laser using the etalon:
 - (b) measuring the wavelength of the laser using an external meter;
 - (c) measuring the representative temperature:
 - (d) modifying a bias current of the laser chip;
- (e) adjusting the representative temperature until the external meter measures the same wavelength as at the step (b);
 - (f) defining a difference in the representative temperature at the steps
- (c) and (e); and
 - (g) measuring the wavelength using the etalon.